ABSTRACT

A confocal microscope system for examination of a sample, comprising a source for a laser beam, a diffraction medium which interacts with the laser beam to produce a plurality of laser beams, and an optical component to apply the plurality of laser beams to the sample. The multiple laser beams operate in parallel and in conjunction with a spatially-resolved area detector to receive the optical images created by each of the beams, resulting in an increased acquisition rate, a compact design and other benefits.